

SOME CUBAN PHORIDÆ WHICH VISIT THE FLOWERS  
OF *ARISTOLOCHIA ELEGANS*.

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During a stay at the Harvard Biological Station at Soledad, Cuba some time ago, Mr. Robert M. Grey, the Curator of the Botanical Garden showed me a beautiful group of *Aristolochia* vines which are grown in one corner of the garden near his house. He told me that they were regularly visited by small Diptera which he thought were Phoridæ and since I have been interested in the members of this family for many years we searched in the few flowers present at that time in hopes of finding some flies. None were to be found, but Mr. Grey promised to send me some at the season when the *Aristolochias* bloom in greater profusion. He did not forget his promise and I received recently a series of specimens which include two common species of West Indian Phoridæ. These are *Dohrniphora venusta* Loew and *Aphiochæta scalaris* Loew, both present in apparently about equal numbers.

It is of course well known that various small insects, particularly Diptera, enter the flowers of *Aristolochia* through the corolla tube which in some species is lined with reflexed hairs that prevent the escape of the visitors until the withering of stigmas and the opening of the anthers. Then the barricade of hairs withers likewise and the insects escape. As the flowers are protogynous, cross fertilization is affected by the first entrance of the insects if they come from another flower, and they later leave with pollen acquired toward the end of their imprisonment.

Several observers have recorded the insect visitors of a number of species of *Aristolochia* (Spengel, Hildebrand, Delpino, Correns, Carr<sup>1</sup>) and find that most of the insects are small Diptera of various kinds. Verrall (British Flies, vol. 1, p. 47) noted in England that *Aristolochia clematidis* is visited most commonly by gall midges (Itonididæ), although Müller and Delpino found

<sup>1</sup>References to many earlier publications are contained in Knuth's well known *Blütenbiologie* vol. 2, pt 2, pp. 366-372; Carr's account is in the *Entomologist's Monthly Magazine*, vol. 60 (1924) p. 258).

Ceratopogonidæ, Chironomidæ, Scatopsidæ and Oscinidæ in the flowers. These families are represented in the flowers of other species of *Aristolochia* quite generally and in several species Phoridæ have been found. The specific names of the Phorids are unfortunately not reliable in any of these old accounts.

Carr found, however, in *Aristolochia siphon* a Phorid, *Aphiochata dahli* Becker commonly present together with several other small flies of other families. All the flies sent by Mr. Grey from the Cuban flowers of *Aristolochia elegans* are Phoridæ, as indicated above.